



United States ~ Asia Environmental Partnership

Energy Wise India Implemented by THE LOUIS BERGER GROUP, INC.



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SUBJECT: Energy Wise India Quarterly Report (1/15/04 – 4/15/04)
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Summary:

This last quarter the EWI team was engaged in a series of outreach activities and completion of the *Energy Wise* Management Tool (EWMT).

There were two sets of activities, the first following on the lessons learned in the machining sector through our activities in the Peenya Industrial Cluster. These events also inaugurated our partnership with our new Corporate Champion, General Motors.

The keynote speaker for our machining sector workshops, which took place in Vadadora, Gujarat, and Peenya, Karnataka, was Mr. Kamesh Gupta, Head of Worldwide Facility Management for General Motors. Mr. Gupta's participation was supported by General Motors and USAEP. General Motors is increasing its presence in the Indian market, with the Vadadora facility which has been running for the past five years and will produce 66,000 cars a year at full capacity, the acquisition of the Daewoo plant in Noida which will be producing over 100,000 cars a year at full capacity, and the research and development facility in Bangalore which will house over 1,000 scientists.

General Motors has been a longtime partner in many voluntary EPA energy efficiency and resource management programs and has an extensive history of best-in-class energy management at their facilities. In recognition of this leadership, EPA has twice awarded GM the Energy Star Partner of the Year. During his presentation, Mr. Gupta was able to share the management systems and strategies GM has put into place to achieve the highest return on their energy investment and provided EWI with a Utility Manager's Handbook that was very much appreciated by attendees at all events. Mr. Gupta also made a presentation at USAID on GM's energy and resource conservation initiatives.

The Vadadora event was attended by about 40 representatives of industry and government. The event was inaugurated by Vadadora Mayor, Mr. Patel – who also assisted by invited members of

industry to the event. Mr. Doshi, Deputy Director of the Gujarat Energy Development Agency (GEDA) also presented on the energy efficiency and alternative energy programs existing in Gujarat. The Vadadora event also included a walkthrough of the General Motors assembly facility in Halol, attended by 25 workshop participants. The tour of the facility focused on the elements of energy and resource management throughout the facility. The participants were very interested in the GM model for energy management, as well as many of the strategies that GM has implemented. While many attendees have the initial response 'of course GM does these things, they are big and rich,' Mr. Gupta and the managers from the Halol facility pointed out that many of their programs are no-cost, and involve mainly raising the awareness of employees and changing behavior. The financial examples were very well received. The Ahmedabad Management Association requested that EWI work with them for further outreach to their membership and for additional copies of materials.

In Gujarat, companies with over 200 kVA in demand are required to have energy audits. In addition, GEDA has been providing audits for companies with less than 200kVA demand. However, there are very limited standards for reporting and auditing. There is an opportunity for EWI to bring the tools and standards being developed by the program to GEDA and incorporate additional rigor into their program. GEDA also has the mandate from the Bureau of Energy Efficiency to develop the state Roadmap on Energy Efficiency. As a result of the workshop and side meetings, EWI will be providing technical assistance to GEDA on the development of the roadmap. This is an opportunity for EWI to bring the industrial voice to the table from the initiation of a policy discussion. We hope to replicate the success of many of the U.S. voluntary programs and get industrial support of the program, financially and politically.

Hosted by EWI Corporate Champion ABB at their Peenya Training Centre, the Peenya event focused on more technical issues utilization of specific technologies and establishment of energy management programs since the participants were already familiar with broader energy management issues from previous EWI training activities. The event was hosted by ABB's at their Training Center in the Peenya campus. Mr. Gupta presented on GM's energy conservation program and how to create a corporate structure to promote energy efficiency. Two of the companies that EWI audited (ABB and Ace Designers) shared their lessons learned from the audit process. ABB also provided several experts to explain the details of energy management with variable speed drives, power circuit managers, energy efficient HVAC systems, etc. Ace Designers also presented on the human resource aspects of energy efficiency management. The meeting was attended by 30 industry representatives as well as Mr. Paul Schwengle of the US-EPA's International Capacity Building Branch. The attendees were particularly interested in developing conservation programs.

The evening event, co-hosted by the Peenya Action Task Force, focused on engaging executives in the Bangalore area in energy management issues, was extremely fruitful in terms of potential follow-up activities. Presentations were made by Mr. Sudhir Kant, President of Millipore, Mr. Gupta on GM's participation in voluntary programs, and Mr. Paul Schwengles of the EPA. Mr. Schwengles was using the audience to see whether Indian industry would participate in voluntary programs with the government. His findings were that companies distrusted the government, and were unlikely to participate in government programs. From the event, EWI was requested to present to members of the Electronics City Industries Association (65 Indian and international high-tech companies) and the Karnataka Drugs and Pharmaceuticals Association (over 40 Indian and international pharma companies). A proposal was also put forward by the Peenya Action Task Force to join forces with a local engineering college to develop a workshop in energy efficiency, teaching students the basics of

energy efficiency and training them to use the EWI energy management tool so that they can establish the baselines of local companies. All of these requests are being evaluated.

The quarter's final event, an intensive practitioner's workshop on process integration for energy efficiency (Pinch Technology) was held in Mumbai. This is a follow up to the EWI Executive Workshop from last year, where many of the attendees requested further information on Pinch. The training was conducted by Dr. Jigar Shah, Vice President of Pace Global Energy Services. Attendees to the training included participants from the cement, refining, and manufacturing sectors. For industries utilizing large steam loads, application of pinch can significantly reduce use of energy and water. This marks Dr. Shah's second workshop for Energy Wise India, with the support of USAEP and a majority of his participation underwritten by Pace and Dr. Shah. Follow up materials on Pinch are being developed for distribution and the website.

Through our activities and discussions with companies and energy practitioners throughout India, EWI has identified the inability of companies to establish an overall energy baseline for a facility and specific pieces of equipment as a critical gap in the effort to increase industrial energy efficiency. Performance contracts, budget planning, and just good energy management requires that a facility have a clear picture of its energy inputs and load distribution. US-AEP TSSC engineer Martin Steinson has been working closely with the EWI team to develop an energy management tool that will allow companies to establish their energy baselines and mass balances. The *Energy Wise* Management Tool has received very positive initial reviews, and it is currently being road tested at the ABB facility in Peenya and the GM facility in Vadadora. EWI Corporate Champion Johnson & Johnson is also evaluating utilizing the EWMT. Once the EWMT is road tested and evaluated by industry experts, it will be available for download on the EWI website, and by CD ROM.

Key Activities Conducted this Quarter:

- Machining Sector Workshops, featuring keynote speaker Mr. Kamesh Gupta, General Motors
 - Vadadora, Gujarat
 - Peenya Industrial Cluster, Bangalore, Karnataka
- Process Integration and Pinch Technology workshop, training by Dr. Jigar Shah, Mumbai
- Walkthrough of General Motors facility to look at energy efficiency projects, Halol, Gujarat
- Executive Dinner with Peenya Action Task Force, Bangalore
- Completion and road testing of Energy Wise Management Tool
- Submission of CSG Grant for pulp and paper benchmarking with Lawrence Berkeley National Lab

Deliverables Completed this Quarter:

- Two practitioner training programs for utility managers in machining sector
- One practitioner training program in process integration and "Pinch"
- One executive training program in developing energy management systems
- Completion of energy management tool (currently being road tested)
- Newsletter #3
- Utility Managers' Handbook on Energy Efficiency (in-kind donation by General Motors)

Deliverables in Process:

- Vendor database

- White paper on green investments in hotel sector

Planned Activities for 2nd Quarter 2004:

- Completion of green investment in hotel sector paper
- Work with ICCL on waste-heat to energy project
- Workshop on energy efficiency and emission reductions
- Develop energy efficiency program with Gujarat Energy Development Agency (GEDA) as part of the mandate from BEE for a state roadmap
 - Incorporate EWI lessons learned and tools
 - Develop training program for using EWI tools

Expenditures to Date:

As of February 31, 2004 total billed to date on the EWI contract is \$379,889.93 with \$610,110.07 remaining.